

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Applicant:	Roy Stubbs	Examiner:	Eileen P. Morgan
Serial No.:	10/625,353	Confirmation No.:	8599
Filed:	July 23, 2003	Group Art Unit:	3723
<b>Due Date:</b>	<b>January 3, 2007</b>	Docket No.:	M120.241.101 / 50771US006
Title:	ABRASIVE MATERIALS		

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**AMENDED APPEAL BRIEF SUBMITTED UNDER 37 C.F.R. § 41.37**

**Mail Stop Appeal Brief – Patents**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

This Amended Appeal Brief is submitted in response to the Notification of Non-Compliant Appeal Brief mailed on March 8, 2007, and further in support of the Notice of Appeal filed on November 3, 2006, appealing the final rejection of claims 1-5 and 7-13 in the above-identified application as set forth in the Final Office Action mailed August 11, 2006.

No fees are believed to be due in conjunction with this paper. However, the U.S. Patent and Trademark Office is hereby authorized to charge Deposit Account No. 50-0471 for any fees that may be due relating to this paper. At any time during the pendency of this application, please charge any required fees or credit any overpayment to Deposit Account No. 50-0471.

Appellant respectfully requests consideration and reversal of the Examiner's rejections of claims 1-5 and 7-13.

**Appeal Brief to the Board of Patent Appeals and Interferences**

Applicant: Roy Stubbs

Serial No.: 10/625,353

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Docket No.: M120.241.101 / 50771US006

Title: ABRASIVE MATERIALS

---

**TABLE OF CONTENTS**

Real Party in Interest.....	3
Related Appeals and Interferences.....	3
Status of Claims .....	3
Status of Amendments .....	3
Summary of The Claimed Subject Matter .....	3
Grounds of Rejection to be Reviewed on Appeal.....	4
Argument .....	5
Conclusion .....	19
Claims Appendix .....	20
Evidence Appendix.....	23
Related Proceedings Appendix.....	24

**Appeal Brief to the Board of Patent Appeals and Interferences**

Applicant: Roy Stubbs

Serial No.: 10/625,353

Filed: July 23, 2003

Docket No.: M120.241,101 / 50771US006

Title: ABRASIVE MATERIALS

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**REAL PARTY IN INTEREST**

The intellectual property embodied in the pending application is assigned to 3M Innovative Properties Company, a Delaware Corporation doing business in Saint Paul, Minnesota.

**RELATED APPEALS AND INTERFERENCES**

The appealed application is a continuation-in-part of U.S. Patent Application Serial No. 08/540,674, now abandoned, which was the subject of Appeal No. 2002-2233. There are no other appeals or interferences known to Appellant that will have a bearing on the Board's decision in the present Appeal.

**STATUS OF CLAIMS**

Claim 6 has been previously cancelled, and claims 1-5 and 7-13 remain pending and stand rejected. Claims 1-5 and 7-13 are thus the subject of the present Appeal.

**STATUS OF AMENDMENTS**

Claims 1 and 5 were amended in an Amendment and Response (filed October 11, 2006) to correct informal errors following the Final Office Action that was mailed on August 11, 2006. For purposes of Appeal, the Examiner entered the amendments to claims 1 and 5, and maintained the rejection of all pending claims set forth in the Final Office Action in an Advisory Action mailed on October 26, 2006.

**SUMMARY OF THE CLAIMED SUBJECT MATTER**

The claims are directed generally to an abrading system. More specifically, an abrading system includes a direct-coated sponge abrasive material. Reference numbers provided below refer to Figures 1 and 2 of the application unless otherwise noted. The term "direct-coated sponge abrasive material" is defined in the specification to include materials in which abrasive material is coated on the surface of a resilient, cellular sponge material together with relevant

**Appeal Brief to the Board of Patent Appeals and Interferences**

Applicant: Roy Stubbs

Serial No.: 10/625,353

Filed: July 23, 2003

Docket No.: M120.241,101 / 50771US006

Title: ABRASIVE MATERIALS

---

binders and to exclude sponge materials that are impregnated throughout with abrasive particles. That is, a direct coated abrasive sponge has only a surface coating of abrasive material. Specification at p. 3, ll. 23-27.

Each of independent claims 1, 5 and 7 include a direct-coated sponge abrasive material 2, which includes a coating on the surface of the sponge material together with binders 5 and abrasive particles 7. The direct-coated sponge material directly bears one part 6 of a two part hook material and loop material attachment system. Specification at p. 4, ll. 14-16.

Independent claim 1 further includes an elongate strap 8 suitable for accommodating a hand that bears, at least at first and second ends 10 and 12, the other part of the hook material or loop material of the attachment system. The first and second ends of the strap are secured to the releasable securing means. Specification at p. 4, ll. 16-18.

Independent claim 5 includes the sponge being in the form of a rectangular block having two major surfaces coated with the abrasive layer as noted above, and four minor surfaces at least one of which bears one part of the releasable securing means. Specification at p. 7, ll. 12-23.

Independent claim 7 includes a back-up pad that includes the other part of the hook material and loop material attachment system. Specification at p. 5, ll. 27-29.

**GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

- I. Whether claim 5 was properly rejected under 35 U.S.C. §102(a) as being anticipated by German Patent No. 9407622 (“German Reference”).**
- II. Whether claims 1-4 and 10-12 were properly rejected under 35 U.S.C. §103(a) as being unpatentable over the German Reference in view of Hong, U.S. Patent No. 4,202,139 (“Hong”).**
- III. Whether claims 7-9 were properly rejected under 35 U.S.C. §103(a) as being unpatentable over the German Reference in view of Cheney et al., U.S. Patent No. 5,309,681 (“Cheney”).**

**Appeal Brief to the Board of Patent Appeals and Interferences**

Applicant: Roy Stubbs

Serial No.: 10/625,353

Filed: July 23, 2003

Docket No.: M120.241.101 / 50771US006

Title: ABRASIVE MATERIALS

---

- IV. Whether claims 1-5 and 10-13 were properly rejected under 35 U.S.C. §103(a) as being unpatentable over Hong in view of Hurst, U.S. Patent No. 2,780,533 (“Hurst”).**
- V. Whether claims 7-9 were properly rejected under 35 U.S.C. §103(a) as being unpatentable over Hong in view of Hurst as applied to the claims above, and further in view of Cheney.**

**ARGUMENT**

**I. Rejection under 35 U.S.C. §102**

**A. Summary of the Rejection.**

Claim 5 was rejected under 35 USC 102(a) as being anticipated by the German Reference. The Examiner’s entire rejection of claim 5 under 35 USC 102 was set forth in the Final Office Action as follows:

“The German reference discloses a direct coated sponge abrasive material directly bearing a securing hook means, wherein the abrasive layer comprises a coating of binders and abrasive material on the surface of the sponge material.”

Final Office Action at 2.

**B. Appellants’ Authority and Analysis.**

It is well accepted that, to anticipate a claim under 35 USC 102, the cited reference must disclose each and every claim element. MPEP 2131. Appellants contend that claim 5 includes elements not disclosed in the German Reference and thus, the rejection of claim 5 under 35 USC 102(a) is improper and should be overturned.

Claim 5 recites a direct-coated sponge abrasive material that includes a sponge “in the form of a rectangular block having two major surfaces ... and four minor surfaces.” Claim 5 further recites “the abrasive layer in the form of a coating with binders that include the abrasive material” coating the major surfaces, and at least one of the minor surfaces bearing “one part of said releasable securing means.”

**Appeal Brief to the Board of Patent Appeals and Interferences**

Applicant: Roy Stubbs

Serial No.: 10/625,353

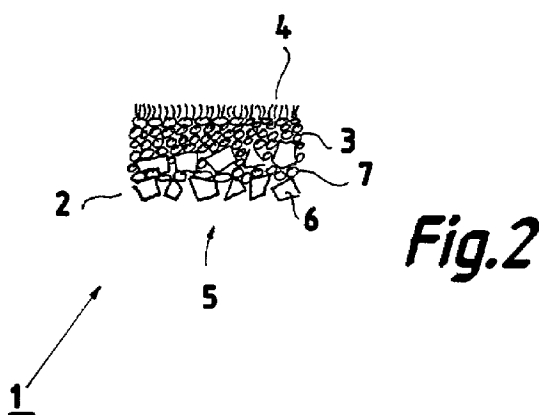
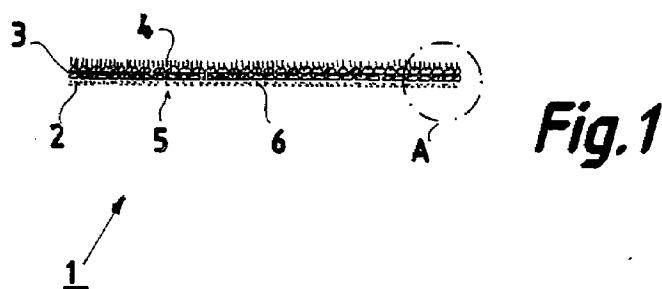
Filed: July 23, 2003

Docket No.: M120.241.101 / 50771US006

Title: ABRASIVE MATERIALS

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Figures 1 and 2 of the German Reference are reproduced below.



First, the Final Office Action alleges that the German Reference discloses “a direct coated sponge abrasive material.” Words in a claim are to be given their broadest reasonable interpretation in light of the specification, and “where an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim.” MPEP 2111.01 (citing *Toro Co. v. White Consolidated Industries Inc.*, 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999)). As noted above, the present specification defines “direct-coated sponge abrasive material” as including materials in which abrasive material is coated on the surface of a resilient, cellular sponge material together with relevant

**Appeal Brief to the Board of Patent Appeals and Interferences**

Applicant: Roy Stubbs

Serial No.: 10/625,353

Filed: July 23, 2003

Docket No.: M120.241.101 / 50771US006

Title: ABRASIVE MATERIALS

---

binders and to *exclude sponge materials that are impregnated throughout with abrasive particles*.

As shown in Figure 2 of the German Reference, the abrasive particles 6 are embedded in the foam carrier 3. In fact, the German Reference teaches away from a device having abrasive particles coated only on the surface of a sponge material. In an attempt to prevent tearing, the German Reference teaches *impregnating* the carrier 3 with the abrasive particles 6, rather than layering the abrasive particles in the manner of the claimed direct-coated sponge abrasive material:

“However, it has been shown that the simple layering of these three components does not represent security against tearing. According to the invention, the abrasive 2 is *embedded in the foam*. ... As is clearly recognizable from Figure 2, the abrasive grains 6 are bonded to one another by means of a binder 7 which at least in part consists of the foam.”

English translation of the German Reference at 4-5 (emphasis added).

The Final office action thus fails to identify a teaching in the German Reference of an abrasive layer in the form of a coating with binders that include the abrasive material. Rather than provide a *coating* with binders, the German Reference teaches embedding abrasive particles into a sponge carrier.

Moreover, the Final Office Action fails to identify a teaching in the German Reference of a minor surface bearing the releasable securing means. The German Reference only discloses that the Velcro-type fastening surface 4 is provided at a major surface of the foam or sponge 3, as shown in Figure 1 thereof reproduced above.

The German Reference thus not only fails to disclose each element of claim 5, it teaches away from the claim limitations. Appellants thus respectfully submit the rejection under 35 USC 102 is improper and should therefore be overturned.

## **II. Rejection of claims 1-4 and 10-12 under 35 U.S.C. §103 based on the German Reference and Hong.**

### **A. Summary of the Rejection.**

Claims 1-4 and 10-12 were rejected under 35 USC 103(a) as allegedly being unpatentable over the German Reference in view of Hong. The Final Office Action admits that the German Reference fails to disclose “the sponge having securing means of loop material or in combination with a strap.” The Final Office Action appears to rely on Hong for providing disclosure of these elements, noting, “Hong et al. teaches an abrasive sponge with loop securing means (20) on the back side for engagement with hooks, wherein a strap (25) is provided having hook engaging means (24).”

The rejection of claims 1-4 and 10-12 based on the combination of the German Reference and Hong does not mention the limitations of claim 1 regarding the abrasive layer.

### **B. Appellants’ Authority and Analysis.**

“Patent examiners carry the responsibility of making sure that the standard of patentability enunciated by the Supreme Court and by the Congress is applied in each and every case.” MPEP § 2141 (emphasis in the original). The Examiner bears the burden under 35 U.S.C. §103 in establishing a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Appellants believe the Examiner fails to establish a *prima facie* case of obviousness in the rejection of claims 1-4 and 10-12 based on the combination of the German Reference and Hong and thus, the rejection is improper and should be overturned.

Three criteria must be satisfied to establish a *prima facie* case of obviousness. First, the Examiner must show that some objective teaching in the prior art or some knowledge generally available to one of ordinary skill in the art would teach, suggest, or motivate one to modify a reference or to combine the teachings of multiple references. *In re Fine* at 1074. Second, the prior art can be modified or combined only so long as there is a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375, 379 (Fed. Cir. 1986). Third,



**Appeal Brief to the Board of Patent Appeals and Interferences**

Applicant: Roy Stubbs

Serial No.: 10/625,353

Filed: July 23, 2003

Docket No.: M120.241.101 / 50771US006

Title: ABRASIVE MATERIALS

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the reference or combined references must teach or suggest all of the claim limitations. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

An applicant is entitled to a patent grant if any of the elements of a *prima facie* case of obviousness is not established. The Federal Circuit has endorsed this view in stating: “If examination at the initial stage does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of the patent.” *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1448 (Fed. Cir. 1992).

Claim 1 includes

“a direct-coated sponge abrasive material directly bearing a releasable securing means comprising one part of a two part hook material and loop material attachment system wherein the abrasive layer comprises a coating on the surface of the sponge material together with binders which include abrasive material”

The final rejection of claims 1-4 and 10-12 based on the combination of the German Reference and Hong does not address this limitation recited in claim 1. The Examiner fails to provide any citations to either the German Reference or Hong identifying where either of these references teaches or suggests this limitation recited in claim 1 and thus also required by claims 2-4 and 10-12 dependent on claim 1. It is therefore unclear how the Examiner is applying the references in the rejection regarding this limitation, and the Final Office Action thus fails to identify how the combined references teach or suggest all of the claim limitations.

Even if the Examiner intended to apply the German Reference as it was applied in the final rejection of claim 5 under 35 USC 102, the German Reference fails to disclose this limitation for the reasons set forth above in the analysis of the §102 rejection.

As such, the Final Office Action fails to establish a *prima facie* case of obviousness, rendering the rejection of claims 1-4 and 10-12 based on the combination of the German Reference and Hong improper.

Claim 1 further includes

“an elongate strap suitable for accommodating a hand, wherein the strap defines a first end and a second end opposite the first end, wherein the strap bears, at

**Appeal Brief to the Board of Patent Appeals and Interferences**

Applicant: Roy Stubbs

Serial No.: 10/625,353

Filed: July 23, 2003

Docket No.: M120,241,101 / 50771US006

Title: ABRASIVE MATERIALS

---

least at the first and second ends, the other part of the hook material or loop material of the attachment system, and further wherein the first and second ends of the strap are secured to the releasable securing means.”

Appellants respectfully contend the combination of the German Reference and Hong fails to teach or suggest this limitation. The Final Office Action admits that the German Reference fails to disclose a strap at all. The Final Office Action further admits that Hong fails to disclose a strap as recited in claim 1: “The strap of Hong is in the shape of a ring made of two straps, one having the opposite securing surface.” Claim 1 recites a strap suitable for accommodating a hand and having the other part of the hook material or loop material of the attachment system. As noted in the Final Office Action, one of the straps disclosed in Hong has the opposite securing surface. However, the strap having the securing surface is not taught as accommodating a hand in Hong, it is shown for securing the two-part strap to the back of the pad.

The combination of the German Reference and Hong thus fails to disclose or suggest a strap suitable for accommodating a hand having the other part of the attachment system.

The Final Office Action goes on to allege, “it would have been obvious to use a single strap with the opposite securing surface on the ends since both work equally well and would have been within the level of ordinary skill in the art.” With regard for the test for obviousness under § 103, a statement that modifications of the prior art to meet the claimed invention would have been “well within the ordinary skill of the art at the time the claimed invention was made” because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not a sufficient basis on which to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993); MPEP § 2143.01 IV (emphasis in the original). Furthermore, claims must be interpreted in light of the specification, claim language, other claims, and prosecution history. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1568, 1 USPQ2d 1593, 1597 (Fed. Cir. 1987), *cert. denied*, 481 U.S. 1052 (1987). A prior patent cited as a §103 reference must be considered in its entirety, “*i.e.* as a *whole*, including portions that lead away from the invention.” *Id.*

**Appeal Brief to the Board of Patent Appeals and Interferences**

Applicant: Roy Stubbs

Serial No.: 10/625,353

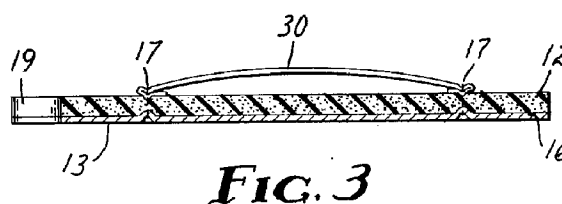
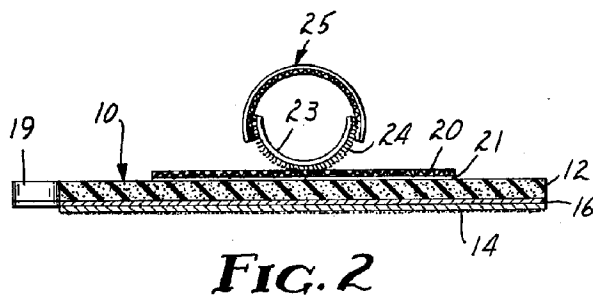
Filed: July 23, 2003

Docket No.: M120.241.101 / 50771US006

Title: ABRASIVE MATERIALS

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Figures 2 and 3 of Hong are reproduced below.



The Hong reference specifically notes that the two-part strap arrangement shown in Figure 2 thereof does not work equally as well as the single strap arrangement shown in Figure 3:

“Ring 25 can then be conveniently engaged with the adhered loop-type material strip 20 on the back side of the pad. Ring 25 is of a size which will accommodate at least one finger of the user. The arrangement is most preferred because it permits easy separation and rotation of the pad 12 and its attached abrasive sheet about the point of attachment to prevent preferential areas of wear on the abrasive surface. It also provides an adjustable ring to accommodate different sizes of fingers of users. This type of handle means is preferred over the sewn strap type as depicted in FIG. 3 because the sewn strap type has a tendency to bow the pad as the fingers are inserted due to the extreme flexibility of the pad.”

Hong at col. 5, ll. 2-15. Rather than disclose or suggest using a single strap with hook and loop fasteners, Hong only discloses fastening the single strap 30 by sewing. This appears to teach away from the concept of securing a single strap with hook and loop fasteners.

**Appeal Brief to the Board of Patent Appeals and Interferences**

Applicant: Roy Stubbs

Serial No.: 10/625,353

Filed: July 23, 2003

Docket No.: M120.241.101 / 50771US006

Title: ABRASIVE MATERIALS

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Since the teachings of Hong lead away from modifying the two-part strap in the manner suggested in the Final Office Action, there is no motivation to modify the reference and the Examiner has failed to establish *prima facie* obviousness.

**III. Rejection of claims 7-9 under 35 U.S.C. §103 based on the German Reference and Cheney.**

**A. Summary of the Rejection.**

Claims 7-9 were rejected under 35 U.S.C. 103(a) as being unpatentable over the German Reference in view of Cheney. The Final Office Action admits that the German Reference does not teach a back-up pad, but states that Cheney teaches a sanding pad with abrasive on one side and on the other side hook and loop material to be attached to a back-up pad for use with a hand or powered sander.

The rejection of claims 7-9 based on the combination of the German Reference and Cheney does not mention the limitations of claim 7 regarding the abrasive layer.

**B. Appellants' Authority and Analysis.**

As noted above, the Examiner bears the burden under 35 U.S.C. §103 in establishing a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Among other things, to establish a *prima facie* case of obviousness, the combined references must teach or suggest all of the claim limitations. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "If examination at the initial stage does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of the patent." *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1448 (Fed. Cir. 1992).

Claim 7 includes

"a direct-coated sponge abrasive material directly bearing a releasable securing means bonded onto a surface of the direct-coated sponge abrasive material, the releasable securing means comprising one part of a two part hook material and loop material attachment system, wherein the abrasive layer comprises a coating on the surface of the sponge material together with binders which include abrasive material"

**Appeal Brief to the Board of Patent Appeals and Interferences**

Applicant: Roy Stubbs

Serial No.: 10/625,353

Filed: July 23, 2003

Docket No.: M120,241,101 / 50771US006

Title: ABRASIVE MATERIALS

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The rejection of claims 7-9 based on the combination of the German Reference and Cheney does not address this limitation recited in independent claim 7. The Examiner fails to provide any citations to either the German Reference or Cheney identifying where either of these references teaches or suggests this limitation recited in claim 7 and incorporated by reference into 8 and 9 dependent on claim 7. The Final Office Action thus fails to identify how the combined references teach or suggest all of the claim limitations.

Even if the Examiner intended to apply the German Reference as it was applied in the final rejection of claim 5 under 35 USC 102, the German Reference fails to disclose this limitation for the reasons set forth in the analysis of the §102 rejection.

As such, the Final Office Action fails to establish a *prima facie* case of obviousness, rendering the rejection of claims 7-9 based on the combination of the German Reference and Cheney improper.

**IV. Rejection of claims 1-5 and 10-13 under 35 U.S.C. §103(a) based on Hong and Hurst.**

**A. Summary of the Rejection.**

Claims 1-5 and 10-13 were rejected under 35 U.S.C. 103(a) as being unpatentable over Hong in view of Hurst. The Final Office Action notes that Hong discloses a strap “in the shape of a ring made of two straps,” but goes on to state “it would have been obvious to use a single strap ... since both work equally well and would have been within the level of ordinary skill in the art.” The Final Office Action further concedes that Hong “does not disclose the sponge being a ‘direct-coated sponge’” but relies on Hurst as allegedly teaching this limitation.

The Final Office Action does not specifically address independent claim 5 in its rejection under 35 U.S.C. §103(a) based on Hong and Hurst.

**B. Appellants’ Authority and Analysis.**

Again, to establish a *prima facie* case of obviousness, the combined prior art references must teach or suggest all the claim limitations, and there must be some suggestion or motivation,

**Appeal Brief to the Board of Patent Appeals and Interferences**

Applicant: Roy Stubbs

Serial No.: 10/625,353

Filed: July 23, 2003

Docket No.: M120.241.101 / 50771US006

Title: ABRASIVE MATERIALS

---

either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. MPEP 2143.

Claim 1 recites

“a direct-coated sponge abrasive material directly bearing a releasable securing means comprising one part of a two part hook material and loop material attachment system ... and  
an elongate strap suitable for accommodating a hand, wherein the strap defines a first end and a second end opposite the first end, wherein the strap bears, at least at the first and second ends, the other part of the hook material or loop material of the attachment system, and further wherein the first and second ends of the strap are secured to the releasable securing means.”

Appellants respectfully submit the combination of Hong and Hurst fails to teach or suggest all of the limitations of independent claim 1. Hurst does not disclose a strap. The Final Office Action admits that Hong fails to disclose a strap as recited in claim 1: “The strap of Hong is in the shape of a ring made of two straps, one having the opposite securing surface.” Claim 1 recites a strap suitable for accommodating a hand and having the other part of the hook material or loop material of the attachment system. As noted in the Final Office Action, only one of the straps disclosed in Hong has the opposite securing surface. However, the one strap having the securing surface is not provided for accommodating a hand, it is used to secure the two-part strap to the back of the pad.

The combination of the German Reference and Hong thus fails to disclose or suggest a strap suitable for accommodating a hand having the other part of the attachment system.

The Final Office Action goes on to allege, “it would have been obvious to use a single strap with the opposite securing surface on the ends since both work equally well and would have been within the level of ordinary skill in the art.” As also noted above, the fact that a reference can be modified and the modification would be well within the ordinary skill of the art is not a sufficient basis on which to establish a *prima facie* case of obviousness. MPEP 2143.01 (emphasis in original, citations omitted).

Figures 2 and 3 of Hong are again reproduced below.

**Appeal Brief to the Board of Patent Appeals and Interferences**

Applicant: Roy Stubbs

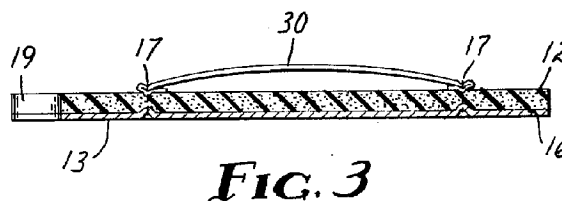
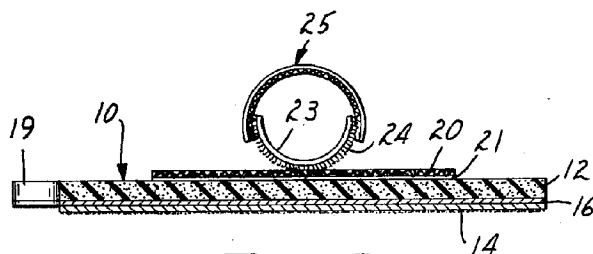
Serial No.: 10/625,353

Filed: July 23, 2003

Docket No.: M120.241.101 / 50771US006

Title: ABRASIVE MATERIALS

---



The Hong reference specifically notes that the two-part strap arrangement shown in Figure 2 thereof does not work equally as well as the single strap arrangement shown in Figure 3:

“Ring 25 can then be conveniently engaged with the adhered loop-type material strip 20 on the back side of the pad. Ring 25 is of a size which will accommodate at least one finger of the user. The arrangement is most preferred because it permits easy separation and rotation of the pad 12 and its attached abrasive sheet about the point of attachment to prevent preferential areas of wear on the abrasive surface. It also provides an adjustable ring to accommodate different sizes of fingers of users. This type of handle means is preferred over the sewn strap type as depicted in FIG. 3 because the sewn strap type has a tendency to bow the pad as the fingers are inserted due to the extreme flexibility of the pad.”

Hong at col. 5, ll. 2-15. Rather than disclose or suggest using a single strap with hook and loop fasteners, Hong only discloses fastening the single strap 30 by sewing. This appears to teach away from the concept of securing a single strap with hook and loop fasteners.

Since the teachings of Hong lead away from modifying the two-part strap in the manner suggested in the Final Office Action, there is no motivation to modify the reference and the Examiner has failed to establish *prima facie* obviousness.

**Appeal Brief to the Board of Patent Appeals and Interferences**

Applicant: Roy Stubbs

Serial No.: 10/625,353

Filed: July 23, 2003

Docket No.: M120,241,101 / 50771US006

Title: ABRASIVE MATERIALS

---

In addition to modifying the strap disclosed in Hong, the Final Office Action suggests modifying Hong to substitute its abrasive material with the abrasive item disclosed in Hurst. However, if a proposed modification renders the prior art unsatisfactory for its intended purpose and/or changes the principle of operation of the prior art, then the teachings of the references fail to establish *prima facie* obviousness. MPEP 2143.01.

Hong discloses a sanding pad “having one major surface 13 capable of providing *temporary* adhesive attachment for a sheet 14 of pressure-sensitive adhesive coated abrasive material.” Hong at col. 3, ll. 13-16 (emphasis added). Hong goes on to note,

“The surface of the pad is modified to *prevent permanent adhesion* of the pressure-sensitive adhesive coated-abrasive sheet material and to provide *temporary attachment* of the pressure-sensitive coated-abrasive sheet.

Col. 4, ll. 21-25 (emphasis added).

Thus, Hong explicitly teaches away from a permanently attached abrasive, disclosing a device having an abrasive sheet temporarily attached to a pad, presumably to allow replacement of the abrasive sheet. Even so, the Final Office Action suggests modifying Hong to replace the temporarily attached abrasive sheet with the directly coated binder/abrasive mixture disclosed in Hurst.

Replacing the temporarily-attached abrasive sheet with a mixture of adhesive and abrasive grains results in the Hong device being unsuitable for its intended purpose: providing a sanding pad with a removable/replaceable abrasive sheet. Further, such a modification completely changes the principle of operation of the device disclosed in Hong. Rather than a pad with a temporarily attached (and thus removable) sheet of abrasive material, the device resulting from the proposed modification would have a permanently attached abrasive.

Appellants thus respectfully contend that a *prima facie* case of obviousness has not been established because prior art reference teaches away from the concept, and the proposed modifications change the principle of operation and render the prior art device unsuitable for its intended operation.



**Appeal Brief to the Board of Patent Appeals and Interferences**

Applicant: Roy Stubbs

Serial No.: 10/625,353

Filed: July 23, 2003

Docket No.: M120.241.101 / 50771US006

Title: ABRASIVE MATERIALS

---

The rejections of claim 1 and claims 2-4 and 10-13 dependent thereon should therefore be overturned.

Regarding the final rejection of independent claim 5 under §103, the Examiner fails to provide a reference to the limitations recited therein or any citations to either Hong or Hurst identifying where either of these references teaches or suggests any limitations of claim 5. It is therefore unclear how the Examiner is applying the references regarding claim 5, and the Final Office Action thus fails to identify how the combined references teach or suggest all of the claim limitations. As such, the Final Office Action fails to establish *prima facie* obviousness of claim 5. The rejection of claim 5 as being unpatentable over Hong and Hurst should therefore be overturned.

**V. Rejection of claims 7-9 under 35 U.S.C. §103(a) based on Hong, Hurst and Cheney.**

**A. Summary of the Rejection.**

Claims 7-9 were rejected under 35 U.S.C. 103(a) as being unpatentable over Hong in view of Hurst, as applied to claim 1 addressed above, and further in view of Cheney. The Final Office Action suggests it would have been obvious to provide the modified Hong/Hurst device with a backup pad assembly as taught by Cheney.

**B. Appellants' Authority and Analysis.**

Claim 7 includes

“a direct-coated sponge abrasive material directly bearing a releasable securing means bonded onto a surface of the direct-coated sponge abrasive material, the releasable securing means comprising one part of a two part hook material and loop material attachment system, wherein the abrasive layer comprises a coating on the surface of the sponge material together with binders which include abrasive material”

The Final Office Action addresses this limitation with the combination of the Hong and Hurst references set forth in the final rejection of independent claim 1. As noted in Appellants' analysis of the rejection of claims 1-5 and 10-13 based on Hong and Hurst, modifying Hong to

**Appeal Brief to the Board of Patent Appeals and Interferences**

Applicant: Roy Stubbs

Serial No.: 10/625,353

Filed: July 23, 2003

Docket No.: M120.241.101 / 50771US006

Title: ABRASIVE MATERIALS

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replace its temporarily attached abrasive sheet with a coating of a mixture of an adhesive and abrasive particles fails to establish *prima facie* obviousness.

As noted above, Hong explicitly teaches away from a permanently attached abrasive, disclosing a device having an abrasive sheet temporarily attached to a pad, presumably to allow replacement of the abrasive sheet. Moreover, replacing the temporarily-attached abrasive sheet with a mixture of adhesive and abrasive grains results in the Hong device being unsuitable for its intended purpose: providing a sanding pad with a removable/replaceable abrasive sheet. Such a modification completely changes the principle of operation of the device disclosed in Hong. Rather than a pad with a temporarily attached (and thus removable) sheet of abrasive material, the device resulting from the proposed modification would have a permanently attached abrasive.

Appellants thus respectfully contend that a *prima facie* case of obviousness of claims 7-9 has not been established, and the rejections should therefore be overturned.

**Appeal Brief to the Board of Patent Appeals and Interferences**

Applicant: Roy Stubbs

Serial No.: 10/625,353

Filed: July 23, 2003

Docket No.: M120.241.101 / 50771US006

Title: ABRASIVE MATERIALS

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**CONCLUSION**

Any inquiry regarding this Appeal Brief to the Board of Patent Appeals and Interferences of the United States Patent and Trademark Office should be directed to David B. Patchett at Telephone No. (651) 736-4713, Facsimile No. (651) 736-3833. In addition, all correspondence should continue to be directed to the following address:

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**Appeal Brief to the Board of Patent Appeals and Interferences**

Applicant: Roy Stubbs

Serial No.: 10/625,353

Filed: July 23, 2003

Docket No.: M120.241.101 / 50771US006

Title: ABRASIVE MATERIALS

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**CLAIMS APPENDIX**

1. (Previously Presented) An abrading system comprising:  
a direct-coated sponge abrasive material directly bearing a releasable securing means comprising one part of a two part hook material and loop material attachment system wherein the abrasive layer comprises a coating on the surface of the sponge material together with binders which include abrasive material; and  
an elongate strap suitable for accommodating a hand, wherein the strap defines a first end and a second end opposite the first end, wherein the strap bears, at least at the first and second ends, the other part of the hook material or loop material of the attachment system, and further wherein the first and second ends of the strap are secured to the releasable securing means.
2. (Original) A direct-coated sponge abrasive material as claimed in claim 1 in which said releasable securing means comprises loop material secured to the sponge.
3. (Original) A direct-coated sponge abrasive material as claimed in claim 1 in which said releasable securing means comprises hook material secured to the sponge.
4. (Original) A direct-coated sponge abrasive material as claimed in claim 1 in which the sponge is in the form of a sheet having opposite major surfaces and the abrasive and securing means are on the opposite major surfaces.
5. (Previously Presented) A direct-coated sponge abrasive material including a sponge, an abrasive layer and a releasable securing means comprising one part of a two part hook material and loop material attachment system, wherein the sponge is in the form of a rectangular block having two major surfaces bearing direct coated with the abrasive layer in the form of a coating

**Appeal Brief to the Board of Patent Appeals and Interferences**

Applicant: Roy Stubbs

Serial No.: 10/625,353

Filed: July 23, 2003

Docket No.: M120.241,101 / 50771US006

Title: ABRASIVE MATERIALS

---

with binders that include the abrasive material, and four minor surfaces at least one of which bears said one part of said releasable securing means.

6. (Cancelled)

7. (Previously Presented) An abrading system comprising:

a direct-coated sponge abrasive material directly bearing a releasable securing means bonded onto a surface of the direct-coated sponge abrasive material, the releasable securing means comprising one part of a two part hook material and loop material attachment system, wherein the abrasive layer comprises a coating on the surface of the sponge material together with binders which include abrasive material; and a back-up pad comprising the other part of a hook material and loop material attachment system.

8. (Original) A direct-coated material as claimed in claim 7 in which the back-up pad is adapted for use on a motor driven sanding machine.

9. (Original) A direct-coated sponge abrasive material as claimed in claim 7 in which the back-up pad is in the form of a block for hand sanding.

10. (Original) A direct-coated sponge abrasive material as claimed in claim 1 in which the loop material comprises brushed nylon.

11. (Previously Presented) A direct-coated sponge abrasive material as claimed in claim 1, in which the sponge material comprises a sheet of open-cell polyester-urethane foam.

12. (Previously Presented) A direct-coated sponge abrasive material as claimed in claim 1, in which the sponge material has a density of about 50 kg/m<sup>3</sup> to 100 kg/m<sup>3</sup>.

**Appeal Brief to the Board of Patent Appeals and Interferences**

Applicant: Roy Stubbs

Serial No.: 10/625,353

Filed: July 23, 2003

Docket No.: M120.241.101 / 50771US006

Title: ABRASIVE MATERIALS

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13. (Previously Presented) A direct-coated sponge abrasive material as claimed in claim 1, in which the sponge material is a sheet of foam material free of abrasive particles.

**Appeal Brief to the Board of Patent Appeals and Interferences**

Applicant: Roy Stubbs

Serial No.: 10/625,353

Filed: July 23, 2003

Docket No.: M120.241.101 / 50771US006

Title: ABRASIVE MATERIALS

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**EVIDENCE APPENDIX**

All of the evidence related to this Appeal is on the record and before the Board.  
Therefore, no additional evidence is identified in this Appendix.

**Appeal Brief to the Board of Patent Appeals and Interferences**

Applicant: Roy Stubbs

Serial No.: 10/625,353

Filed: July 23, 2003

Docket No.: M120.241.101 / 50771US006

Title: ABRASIVE MATERIALS

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**RELATED PROCEEDINGS APPENDIX**

There are no additional related proceedings to be considered in this Appeal. Therefore, no such proceedings are identified in this Appendix.